AMENDMENTS

Amendments to the Claims

Claims 1-10 and 12-30 were previously cancelled, and claims 31-46 were previously added. Please amend claim 31, to add a missing word (controlled), and add new claims 47 and 48 as indicated below.

The following list of claims replaces all previous listings of the claims.

Claims 1-10. Cancelled.

11. (previously presented) A process, in which a first hydroxyl-substituted organic compound selected from the formulae R^1CH_2OH, R^1R^2CHOH and $R^1R^2R^3COH$ is exposed, optionally in the presence of one or more further organic compounds selected from second hydroxyl-substituted organic compounds of the formulae R^4CH_2OH, R^5R^6CHOH, and $R^7R^8R^9COH$ and carbonyl compounds of the formula $R^{10}R^{11}CO$, to a heterogeneous catalyst which is able to provide a source of acid in a continuous flow reactor under supercritical conditions or at near-critical conditions for the fluid that is acting as solvent, with the result that an ether is formed from two hydroxyl-substituted organic compound molecules in a dehydration reaction, an acetal or ketal is formed by reaction between a hydroxyl-substituted organic compound molecule and a molecule of a said carbonyl compound, or an alkene product is produced by dehydration of a single hydroxyl-substituted organic compound molecule, wherein the conditions of temperature, pressure, and flow rate are controlled according to the product to be obtained, and wherein each of R^1 to R^{11} is independently selected from: hydrogen or hydroxyl; an optionally substituted alkyl, alkenyl, alkynyl, aralkyl, cycloalkyl, cycloalkenyl, or aryl; or a heterocyclic group, wherein the catalyst is selected from: zeolites, metal oxides, molecular sieves, clays, or sulfonic acid derivatives and wherein the source of acid of the catalyst is provided by a sulfonic acid group.

Claims 12-30. Cancelled.

31. (currently amended) A process in which reactants consisting only of an organic compound having the formulae R^1CH_2OH, R^1R^2CHOH or $R^1R^2R^3COH$ optionally in the presence of one or more further organic compounds having the formulae R^4CH_2OH, R^5R^6CHOH, $R^7R^8R^9COH$ or $R^{10}R^{11}CO$, are exposed to a heterogeneous catalyst which is able to provide a source of acid in a continuous flow reactor under supercritical conditions with the result that an ether, acetal, ketal, or an alkene-product is formed, wherein the conditions of temperature, pressure, and flow rate are independently controlled, and wherein each of R^1 to R^{11} is independently selected from: hydrogen or hydroxyl; an optionally substituted alkyl, alkenyl, alkynyl, aralkyl, cycloalkyl, cycloalkenyl, or aryl; or a heterocyclic group.

32. (previously presented) A process according to claim 31, wherein each of R^1 to R^{11} when present is an optionally substituted alkyl group.

33. (previously presented) A process according to claim 32, wherein each of the alkyl groups independently contains not more than 10 carbon atoms in the carbon chain excluding optional substituents if present.

34. (previously presented) A process according to claim 31, 32 or 33, wherein the total number of alcohol groups within the organic compound does not exceed three.

35. (previously presented) A process according to claim 31, wherein the catalyst is selected from: zeolites, molecular sieves, clays or sulfonic acid derivatives.

36. (previously presented) A process according to claim 35, wherein the catalyst is supported on an inert carrier.

37. (previously presented) A process according to claim 35 or 36, wherein the catalyst includes a promoter.

38. (previously presented) A process according to claim 35 or 36 wherein the acidity of the catalyst is provided by a sulfonic acid group.

39. (previously presented) A process according to claim 37, wherein the acidity of the catalyst is provided by a sulfonic acid group.

40. (previously presented) A process according to claim 31, wherein the reaction conditions are controlled in such a way that the products are selectively formed in high yield with insignificant rearrangement.

41. (previously presented) A process according to claim 40, wherein the reactant molecules are aliphatic and/or aromatic alcohols

42. (previously presented) A process as claimed in claim 41, wherein the reactant molecules are aliphatic alcohols.

43. (previously presented) A process according to claim 31, in which the product is an ether.

44. (previously presented) A process according to claim 43, in which the reactant(s) and the product are straight-chain n-alkyl molecules.

45. (previously presented) A process according to claim 40 or 41, wherein the reaction conditions can be controlled in such a way that a particular aliphatic alcohol is converted into an alkene in preference to an ether.

46. (previously presented) A process according to claim 31, in which the reactant(s) form a single homogeneous phase.

47. (new) A process according to claim 11, with the result that an ether is formed from two hydroxyl-substituted organic compound molecules in a dehydration reaction, or an acetal or ketal is formed by reaction between a hydroxyl-substituted organic compound molecule and a molecule of a said carbonyl compound, wherein the conditions of temperature, pressure, and

flow rate are controlled according to the product to be obtained, and wherein each of R^{I} to R^{II} is independently selected from: hydrogen or hydroxyl; an optionally substituted alkyl, alkenyl, alkynyl, aralkyl, cycloalkyl, cycloalkenyl, or aryl; or a heterocyclic group, wherein the catalyst is selected from: zeolites, metal oxides, molecular sieves, clays, or sulfonic acid derivatives and wherein the source of acid of the catalyst is provided by a sulfonic acid group, and wherein the reaction conditions are controlled in such a way that the products are selectively formed in high yield with insignificant rearrangement.

48. (new) A process according to claim 31, with the result that an ether, acetal or ketal product is formed, wherein the conditions of temperature, pressure, and flow rate are independently controlled, and wherein each of R^{I} to R^{II} is independently selected from: hydrogen or hydroxyl; an optionally substituted alkyl, alkenyl, alkynyl, aralkyl, cycloalkyl, cycloalkenyl, or aryl; or a heterocyclic group, and wherein the reaction conditions are controlled in such a way that the products are selectively formed in high yield with insignificant rearrangement.